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AMENDMENTS TO THE CLAIMS

Claims 1-20 (Cancelled)

21. (Previously presented) A method of testing for faults in an electrical circuit, the circuit having a load, the method comprising the steps of:

- providing a fault monitor, having:
 - a power supply connected in series with a resistor;
 - a connection for connecting to the circuit with the load in parallel with the resistor;
 - a voltage sensor connected in series with the resistor; and
 - switching means for opening and closing the connection between the power supply and the resistor and load;
- providing a test switching means connected in series with the resistor and in parallel with the current sensor, in sequence after the first transistor;
- closing the test switching means;
- determining whether voltage is sensed by the voltage sensor, thereby determining whether current is flowing through the load;
- connecting the fault monitor to the circuit with the load in parallel with the resistor;
- passing a current through the circuit and fault monitor; and
- detecting the resulting voltage at the voltage sensor, thereby determining whether the total resistance provided by the load indicates a failure within the load and

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also determining a number of elements having faults within the load based on the difference between the resulting voltage and an expected voltage.

22. (Original) The method according to claim 21, wherein the steps of closing the test switching means and determining whether voltage is sensed by the voltage sensor are performed before passing a current through the circuit and fault monitor, and detecting the resulting current at the current sensor.

23. (Original) The method according to claim 21, wherein the steps of closing the test switching means and determining whether voltage is sensed by the voltage sensor are performed after passing a current through the circuit and fault monitor, and detecting the resulting voltage at the voltage sensor.

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